

## DOCUMENT RESUME

ED 054 748 24 HE 002 559  
AUTHOR Himmel, Clark E.  
TITLE College Learning with and without Formal Classroom Instruction - A Comparison.  
INSTITUTION Wisconsin State Universities Consortium of Research Development, Stevens Point.  
SPONS AGENCY Office of Education (DHEW), Washington, D.C.  
BUREAU NO BR-6-2728-21  
PUB DATE Aug 69  
GRANT OEG-3-6-062728-2129  
NOTE 36p.

EDRS PRICE MF-\$0.65 HC-\$3.29  
DESCRIPTORS \*Higher Education; \*Learning; \*Student Teacher Relationship; \*Teacher Role; Teaching; Teaching Methods; \*Teaching Techniques

## ABSTRACT

This report examines the relationship between student learning and teacher pedagogy by focusing on two discrete instructional methods: traditional teacher-directed versus student self-directed study. An experiment was administered to two groups of college students enrolled in a psychology course, and the control group having class meetings and lectures, the other studying independently in a "learning center" with no personal teacher contact. The initial part of this report describes the method of student selection, procedures for collecting data, and descriptions of all teaching materials and texts used in the experiment, as well as charts and tables comparing final examinations scores and student questionnaire data. A conclusion, which takes into account the Hawthorne Effect as an independent variable reaffirms the thesis that self-directed intellectual pursuit is, on the whole, a more effective teaching technique. The last section of the report consists of a four-part appendix: (a) the course outline and calendar, required texts, and a syllabus; (b) materials found in the "learning center"; (c) the final examination test questions; (d) student opinion questionnaire. (BHC)

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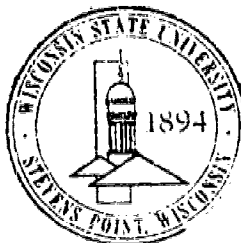
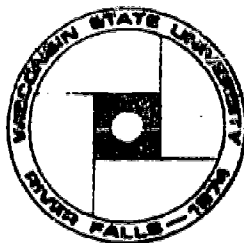
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**The Wisconsin State Universities Consortium of Research Development**

**Research Report**

**COLLEGE LEARNING WITH AND WITHOUT FORMAL CLASSROOM INSTRUCTION - A COMPARISON**

Clark E. Himmel  
Wisconsin State University - La Crosse  
La Crosse, Wisconsin

**Cooperative Research**

**Wisconsin State Universities  
and the  
United States Office of Education  
Bureau of Research - Higher Education**

**Office of the Director WSU-CORD  
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## FINAL REPORT

## CORD Project

Project No. 760-541-70-1007-36

Grant No. 3-6-062728-2129

Local Project No. 21COLLEGE LEARNING WITH AND WITHOUT FORMAL  
CLASSROOM INSTRUCTION - A COMPARISON

Clark E. Himmel

Wisconsin State University - La Crosse

La Crosse, Wisconsin

August 29, 1969

U.S. DEPARTMENT OF  
HEALTH, EDUCATION, AND WELFARE  
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The research reported herein was performed pursuant to a Wisconsin CORD grant with the Office of Education, U.S. Department of Health, Education, and Welfare. Contractors undertaking such projects under Government sponsorship are encouraged to express freely their professional judgement in the conduct of the project. Points of view or opinions stated do not, therefore, necessarily represent official Office of Education position or policy.

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### Summary

Several measures of educational outcomes were compared for two groups of university students enrolled in an introductory psychology course, the "control" group being taught by a traditional classroom lecture method, and the experimental group carrying out structured, self-directed study of essentially the same course contents without the use of class meetings, lectures, or contact with a teacher. The two groups did not differ significantly at the beginning of the course on important relevant variables (including age, sex, academic aptitude, college grades). Significant differences were found favoring the experimental group on measured course achievement (end-of-course final exam) and on attitude toward the method of instruction used. Trends on other important outcome measures tended to favor the experimental group as well.

Members of the Psychology Department at Wisconsin State University - La Crosse have been concerned about instructional techniques applied to our course offerings, particularly in general psychology where added student numbers have magnified the problems already present. The department has attempted to modify techniques by introducing a "team-teaching" approach to the general psychology course, but this has led to results which have been far from satisfying. The present study has yielded empirical evidence, information, and guidance with reference to instructional techniques that have proved very useful in the implementation of these and similar techniques in psychology courses both here at Wisconsin State University - La Crosse and elsewhere.

Much past research on college learning has focused on manipulation of more "traditional" teaching variables, such as class size, quiz or experimental laboratory sections as supplemental techniques, ability grouping in some form, or teacher-presentation variables. Recently, some attention has been directed toward the study of innovative techniques of instruction, such as programmed instruction (sometimes computer - assisted), unstructured seminars, and self-directed or independent study.

Quite a number of years ago, it was demonstrated that college students learned as much from simply reading a passage as from hearing essentially the same material in a lecture (Greene, 1928). In an experiment to determine the effectiveness of various instructional methods, Parsons, Ketcham, and Beach (1958) set up groups in which students did not come to classes at all. These "classless" groups did best of all of the various instructional groups on the final examination that was administered. Another study carried out by McCollough and Van Atta (1958) at Oberlin College yielded no significant differences in learning when traditional classroom techniques and independent study in small student groups with no instructor were compared. These results were found alike in the subject matter areas of psychology, mathematics, and science, and for learning measured either by usual achievement tests or by tests of "learning resourcefulness". Jensen (1951) compared four instructional groups, including one in which students were completely excused from class attendance, and the results showed no significant differences in gains among the four groups. Perhaps the most favorable results on independent study were obtained by Gruber and Weitman (1960) in studies carried out at the University of Colorado. A self-directed study group in freshman English was significantly superior to control groups on a test of grammar. Independent study students in physical optics were compared to conventional classes and were found to have gained and maintained an advantage in difficult applications of learned facts and the

learning of new material (Weitman and Gruber, 1960). Research at the University of Tennessee by Milton (1959) found no differences in measured academic achievement between introductory psychology students who were excused from regular class attendance and those who were not. In published accounts of this research, no significant differences are claimed between the two groups on mean accumulated points from course achievement tests, but personal communication with Professor Milton revealed a suspected statistical error, and the group which did not attend class actually showed significantly greater test achievement than the class-attended group. Then in a two-year follow up, Milton (1962) also demonstrated essentially no differences between these same two instructional groups on other behavioral measures assumed to be related to academic achievement, including college drop-out rates and frequency of election of advanced psychology courses. A more detailed review of some of the foregoing studies and of other related research is that by McKeachie in Cage's Handbook of Research on Teaching (1963).

The present study was designed to compare measured educational outcomes for two groups of students enrolled in an introductory psychology course, one group (the "control" group) being taught in one classroom by a traditional classroom-lecture technique, the other group (the experimental group) carrying out self-directed study of essentially the same course contents without the use of class meetings, lectures, or any continuing personal contact with a teacher. The research hypothesis tested was that the self-directed group would score significantly better on several different educational outcome measures than would the more traditionally taught group.

### Method

Subjects An initial sample of 39 subjects for the experimental (self-directed study) group was randomly selected from the registration in one large, regularly scheduled section of Psychology 201, General Psychology, for spring semester of the 1967-68 school year. Five of these subjects eventually dropped from the course, three of them within the first two weeks of the semester for reasons independent of this study, bringing the total number of experimental subjects who completed the course to 34. During the last two weeks of the semester, a sample of 34 subjects (control group) was randomly selected from the 79 students who remained in the regular lecture class of the same section of General Psychology. It was assumed here that the process of student attrition acted in a similar fashion within both the experimental class and the regular lecture class so that the representativeness and comparability of the two groups (experimental and control) were not



impaired. Descriptive data gathered on both groups and presented in Table I supported this assumption.

Materials and Procedures The experimental group was separated from the regular lecture class after the first day's meeting, was given two days of careful orientation to the self-directed study technique and materials, and then was released for the remainder of the semester from any class attendance requirements or any continuing contact with a live teacher except for the periodic scheduled examinations which necessitated group meetings. A week-by-week outline of topics to be covered, learning activities to be engaged in, and examination dates (included as Appendix A) guided the experimental students' study both away from school premises and in a room designated as a "learning center" located adjacent to the psychology departmental offices. Each student in the experimental group was provided with a personal copy of the primary programmed text, (Bell and Hunt, 1967) for use in or away from the learning center, while the learning center housed the remainder of the learning materials (listed in Appendix B), including several different programmed texts, reference volumes, books of collected readings, reprints of journal articles, pre-recorded tapes by nationally-known experts in the field, and a student librarian familiar with all of the materials and equipment, who kept records of time spent by the experimental students in the learning center each week. Further, these students reported weekly the amount of time spent in studying general psychology away from the learning center.

The control group remained within the regularly scheduled large lecture section throughout the semester, were assigned readings in a widely-used text in general psychology (Ruch, 1967), and received lectures on a regularly scheduled (three hours per week) basis, the lectures delivered by seven departmental faculty members in a pseudo-"team-teaching" approach, one which had become "traditional" for this course at La Crosse State University. Each of these teachers spent approximately two weeks lecturing on that portion of general psychology course contents in which he is most expert and/or most interested professionally. These lectures paralleled the assigned text reading topics to a large extent.

The periodic, scheduled, in-course examinations for both the experimental and the control groups were highly similar in content coverage and were identical in form of

questions (objective-type), length, total point values possible, and frequency and dates of administration. Both groups completed an identical 100-item (objective-type) final examination at end of course (included as Appendix C) and one week prior to this exam both groups completed and returned a two page student-opinion blank (included as Appendix D), the first page of which was designed to measure attitude toward or opinion about the subject matter content of general psychology, while the second page was designed to measure attitude toward or opinion about the teaching - learning method used in any given student's class of general psychology.

A re-administration of the 100-item final exam and of the student-opinion blank was carried out for all students who were available from both the experimental and control groups in September, 1968, for a three-month follow-up. Then finally, a twelve-month follow-up (through and including the spring semester, 1969) was carried out to gather the following data:

- (a) number of courses in psychology subsequently elected by students in each group
- (b) changes in numbers of students from each group declaring psychology as their undergraduate major field
- (c) college grade point average for both groups subsequent to the completion of the general psychology course in the spring semester of 1968 in
  - (i) overall course work
  - (ii) psychology course work
- (d) numbers of students from each group subsequently discontinuing study at this university due to
  - (i) personal choice ("drop-out")
  - (ii) academic ineligibility ("flunk-out")

### Results

Final examination scores for experimental (self-directed study) and control (regular lecture) groups were compared (Table II), and at the end of the course the experimental subjects displayed a significantly greater mastery of course contents as measured by this rather

TABLE I

Data Characterizing Experimental and  
Control Groups at Beginning of Course, February, 1968

Description of Data Gathered	Experimental Group	Control Group	Statistical Comparisons (If any)
Sample Size	N = 34	N = 34	—
Chronological Age: Mean	$\bar{x}$ = 21 yrs. 11 mo.	$\bar{x}$ = 20 yrs. 11 mo.	—
Median	Med. = 20 yrs. 1/2 mo.	Med. = 19 yrs 11 1/2 mo.	Median Test $\chi^2 = 0$ (N.S.)**
Student Classification re Sem. hrs. completed (1=1st sem. frosh., 8-2nd sem. sr.)	$\bar{x}$ = 3.59 (Mean)	$\bar{x}$ = 3.79 (Mean)	—
Frequency of Males and Females	(M) f = 24 (F) f = 10	(M) f = 18 (F) f = 16	$\chi^2 = 1.56$ (N.S.)
Frequency of single and married students	(S) f 29 (M) f = 5	(S) f = 30 (M) f = 4	$\chi^2 = 0$ (N.S.)
Mean ACT Composite Standard Score (Not Available for a few Students)	$\bar{x}$ = 21.68 S.D. = 4.37 N = 28	$\bar{x}$ = 21.87 S.D. = 4.09 N = 31	t = 0.045 (N.S.)
Mean Cumulative Grade Point Average (4.0=A) (1.0=D)	$\bar{x}$ = 2.53 S.D. = 0.615 N = 34	$\bar{x}$ = 2.36 S.D. = 0.597 N = 34	t = 1.16 (N.S.)
Frequency of Psychology Majors *	f = 1	f = 1	—

\* Majors chosen by all 68 subjects were gathered and no significant differences in choice of major areas were judged to be present in comparing the experimental with the control group.

\*\* N.S. = Not significant

TABLE II

## COMPARISONS OF FINAL EXAMINATION SCORES

Time of Administration	Experimental Group			Control Group			Statistical Comparisons
	Mean	Standard Deviation	N	Mean	Standard Deviation	N	
At End of Course (May, 1968)	$\bar{x}=67.00$ (Med=69.5)	10.17	34	$\bar{x}=61.41$ (Med=60.5)	11.59	34	$t = 2.11$ ( $P < .05$ )
At three-month follow-up (Sept., 1968)	63.92 (Med=63.5)	8.55	12	63.25 (Med=64.0)	11.44	12	$t = 0.16$ (N.S.)

\* N.S. = Not significant

traditional measure of course achievement. Scores for only 12 subjects from each of the two groups were available at follow-up testing with the same final examination approximately three months after the completion of the course, and no significant differences in mean retention scores were detected. It was interesting to note that for those obviously selective samples of 12 each, the mean achievement score for the experimental subjects did not show any drastic decrement, while the mean score for the control subjects at follow-up was slightly (but probably not significantly) higher than the mean for all 34 controls tested at course-end. In order to obtain an estimate of performance on this final examination for representative students just beginning the introductory psychology course, the examination was administered to 115 students newly enrolled in Psychology 201, General Psychology, fall semester, 1968, during their first full class period of attendance, and yielded a mean of 36.01, standard deviation of 10.21, and a range of scores from 8 through 58 on this 100-item test. Further, the entire regular lecture class of 79 students including the 34 control students took the same final examination at course-end and obtained a mean of 60.50 and a median of 60.25, values which are slightly lower than the comparable end-of-course scores for either the experimental group or the control group separately.

Data from the student opinion blank (presented in Table III) were also compared. At the end of the course, the experimental group gave higher mean ratings for both subject matter contents and teaching-learning methods used in their section of the class than did the control group, with a large and highly significant difference obtained for the ratings of teaching-learning method only. Three months later selective sub-samples from the two groups contributed data which indicated no difference in ratings of subject matter contents and a smaller but still significant ( $P < .10$ ) difference persisting in ratings of the respective teaching-learning methods used in the two classes favoring the experimental class. On the "five-point" rating scale items (Appendix D), the most favorable point for each item was designated as a "5" and the least favorable a "1". Ratings from the five items on each page for each student were averaged (arithmetic mean) and this mean score then treated as a simple raw score for each student in generating the data presented in Table III.

An estimate of the amount of time each student devoted to the course was available for the experimental students for the 16-week semester of the course. A mean of 1.83 hours per week per experimental student was spent studying the Bell and Hunt program away from the learning center for a total of 4.29 hours per week per experimental student. This compared favorably with an estimate of the time spent by a typical control student per week in study and in attendance at lectures three times per week of 4.5 hours per week per control student (three hours lecture, one and one-half hours text reading away

from classroom).

Grade-point-average was accumulated for the experimental and control students for the 12 month period, subsequent to their completion of the general psychology course, for all courses in which they enrolled and separately for their psychology course work only. Data was available for 26 experimental students and 24 control students which showed mean grade-point-averages in all subsequent courses to be 2.61 and 2.46 respectively (4.0 = A), although this difference did not significantly favor the experimental group ( $t = 0.845$ ). For psychology course work separately, nine experimental students elected a total of 22 psychology courses with a resultant mean grade-point average of 2.88, while five control students elected 11 psychology courses yielding a mean grade-point-average of 2.67; these very small and highly selected sub-samples precluded any efforts at statistical inference, but the difference in grade-point-average observed is very small and probably of little practical significance, although a trend toward more frequent election of psychology courses by experimental students may be inferred from these data.

At the outset of the present study, only one psychology major was to be found in each of the two research groups, and as of 12 months after the completion of the general psychology course, two students from the control group and three from the experimental group had formally declared psychology as their major field of study. Further, by the time of the 12-month follow-up, seven control students were dismissed from the university as academically ineligible ("flunked out"), while no experimental students had been so dismissed, and six control students discontinued study out of personal choice ("dropped out"), while four experimental students left for the same reason.

### Conclusions

A full semester of structured, independent or self-directed study for students in general psychology was shown to confer some significant advantages for such students when compared with similar students who were taught the same course contents in a more traditional lecture class. One such advantage accrued in significantly better final exam performance at end-of-course for the self-directed study group, although the practical significance of this approximately six-item advantage within a 100-item test may be minimal. The fragmentary evidence bearing on course achievement after the three-month retention interval cannot serve as a basis for any firm conclusions but suggested that earlier differences in course attainment may be of a rather temporary nature.

While assessment of student opinion at the end-of-course showed no systematic difference in attitude toward the subject matter of psychology between the two different instructional groups, a clearly more favorable



TABLE III

COMPARISONS OF STUDENT OPINION BLANK DATA

Time of Administration	Attitude and Opinion Measured Toward:	EXPERIMENTAL GROUP			CONTROL GROUP			STATISTICAL COMPARISONS
		Mean	Standard Deviation	N	Mean	Standard Deviation	N	
At end of course (May, 1968)	Subject Matter Contents of Course	3.70	0.76	34	3.49	0.95	34	$t = 1.00$ (N.S.) *
	Teaching-Learning Method Used	3.82	0.88	34	2.82	1.00	34	$t = 4.38$ ( $P < .001$ )
At three-month follow up (Sept., 1968)	Subject Matter Contents of Course	3.82	0.62	12	3.80	0.94	10	$t = 0.06$ (N.S.)
	Teaching-Learning Method used	4.05	0.91	12	3.46	0.68	10	$t = 1.71$ ( $P < .10$ )

attitude toward the teaching-learning method used for self-directed study students emerged, and this attitudinal-motivational variable may have acted to mediate the resulting advantage in measured course achievement. The incomplete three-month follow-up data suggested that this same pattern of attitude and opinion may have been persistent. Further, these advantages accrued with no additional demands on study-time from self-directed study students, as figures for hours spent in learning effort for these students approximated very closely those estimated for students in the more traditional lecture-reading course.

In addition, several tenuous but encouraging trends toward "desirable" behaviors were noted for students in the self-directed study class following completion of the course; notably, a tendency toward more frequent subsequent election of additional psychology courses and choice of psychology as a major field of study, and tendencies to persevere in school work as attested to by their less frequent "drop outs" and "flunk-outs" from study at this university.

To be sure, these findings may in large part be amenable to explanation via the well-known "Hawthorne effect" acting as an independent variable of major import, but even if this were clearly the only interpretation available (and it is not), nothing should preclude the systematic use of this morale-social stimulus-motivational variable as a factor with potentiality for enhancing the academic performance of students. As Sommer (1968) has stated, "It is the thesis of this article that Hawthorne effects, rather than being some extraneous disruptive influence in psychological research, are an important and ever-present factor in any field situation." Further, "at least, we must not let them be bracketed as random errors or curiosities".

Giving undergraduate students greatly increased freedom and responsibility for structuring and initiating their own learning efforts in a course might be hypothesized as fostering the development of a more "active" role in learning as well as fostering greater ability to carry on independent, self-initiated intellectual activities which might persevere long after the completion of such a course and in a wider variety of intellectual tasks ("transfer value"). Such desirable educational outcomes were not explicitly included in dependent variable measures in the present study for the very good reason that they are quite difficult to operationally define and assess, especially in their long-term manifestations. Work is now under way to develop methods of assessing and collecting these very important but elusive self-directed study outcomes for use in similar research in the near



future. That some amounts of the unique advantages hypothesized for self-directed study may have accrued for such students might be inferred from the available results, which indicated that self-directed study was at least as effective as, and, on some measures, significantly more effective than the more traditional lecture technique in fostering outcomes or objectives of instruction usually mentioned as those for which the lecture method is well suited to reach.

Certainly, if students can effectively learn and meet the usual achievement criteria specified for a course of study without the use of traditional lecture and (as in this study) without any continuing contact with a live teacher, then a careful search for a more appropriate role for the teacher as an important part of students' education seems imperative.

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## Course Outline and Calendar

Psych. 201  
General Psychology

<u>DATES</u>	<u>TOPIC</u>
1/29-2/2	1 Orientation-Introduction
2/5-2/9	2 History of Psychology-Current Pursuits-Research Methods
2/12-2/16	3 Physiological foundations of Behavior
2/19-2/23	4 Heredity-Environment-Determiners of Development
2/26-3/1	5 Theories of Personality
3/4	50 pt. exam on topics 1, 2, 3, 4, and 5
3/6-3/11	6 Intelligence and Ability
3/13-3/20	7 Learning-Kinds of Learning-Reinforcement
3/22-3/25	8 Learning-Practice-Remembering and Forgetting
3/27	40 pt., exam on topics 6, 7, and 8
3/29-4/5	9 Motivation and Drive
4/17-4/22	10 Emotion
4/24-5/1	11 Frustration-Defense reactions, Neuroses and Psychoses
5/3-5/8	12 Psychotherapy
5/10	50 pt. exam on topics 9, 10, 11, and 12
5/13-5/15	13 Competition-Cooperation-Illegal Behavior
5/17-5/20	14 Persuasion, (Propaganda, Mass Communication, Advertising)
5/22	25 pt. exam on topics 13 and 14
5/24-6/1	100 pt. comprehensive final exam

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(hardback)

<u>DATES</u>	<u>ASSIGNMENTS</u>
1/29-2/2	TOPIC 1: ORIENTATION-INTRODUCTION
2/5-2/9	TOPIC 2: HISTORY OF PSYCHOLOGY-CURRENT PURSUITS-RESEARCH METHODS  BELL & HUNT: Units 1, 2, 3, 4 (pp. 1-40) REPRINT: "Scientific Method in Psychology"
2/12-2/16	TOPIC 3: PHYSIOLOGICAL FOUNDATIONS OF BEHAVIOR  BELL & HUNT: Units 5, 6, 7, 8 (pp. 41-62) FERNALD & FERNALD: pp. 18-37 (Frames 2-1 to 2-96) MALPASS: Part II, Biological Basis of Behavior, pp. 43-90, which includes: Unit 1, Heredity & Behavior, pp. 45-66; Unit 2, Biological Mechanisms and Functions, pp. 66-90.
2/19-2/23	TOPIC 4: HEREDITY-ENVIRONMENT-DETERMINERS OF DEVELOPMENT  BELL & HUNT: Unit 9 (pp. 63-68) MALPASS: Part IV, The Development of Behavior, pp. 159-241, which includes: Unit 1, Early Development, pp. 161-193; Unit 2, Development in Childhood, pp. 194-234; Unit 3, Adolescence & Early Adulthood, pp. 235-241, and the Summary of Part IV, pp. 259-262. REPRINT: Scientific American #469, "Early Environment" TAPE 120: "Heredity & Environment" (16 min.) TAPE 137: "Principles of Child Development" (20 min.)
2/26-3/1	TOPIC 5: THEORIES OF PERSONALITY  BELL & HUNT: Units 10, 11 (pp. 69-81) TYLER: pp. 84-88 WHITTAKER: pp. 480-498. REPRINT: "Personality Theory Revisited & Reevaluated" TAPE 1116: "The Assessment of Personality" (30 min.)
3/4	50 POINT EXAM ON TOPICS 1, 2, 3, 4, 5.

## Appendix A

- 3/6-3/11 TOPIC 6: INTELLIGENCE & ABILITY
- BELL & HUNT: Units 12, 13 (pp. 82-96)  
FERNALD & FERNALD: Chapter 3, Individual Differences:  
Measurement, pp. 38-55:  
Chapter 5, Intelligence, pp. 73-91.  
TYLER: Chapter 2: Basic Statistics, pp. 12-20.  
TYLER: Chapter 3: Psychological Tests, pp. 25-39.  
Chapter 4: Intelligence Tests, pp. 40-54.
- 3/13-3/20 TOPIC 7: LEARNING--KINDS OF LEARNING--REINFORCEMENT
- BELL & HUNT: Units 14 & 15 (pp. 97-113)  
SMITH & MOORE: Chapter 2, Classical Conditioning, pp. 18-65.  
Chapter 3, Instrumental Learning, pp. 66-120.  
FERNALD & FERNALD: Chapter 12, Remembering & Forgetting, pp. 198-201.  
Frames 12-1 to 12-21.  
REPRINT: "How Children Learn"
- 3/22-3/25 TOPIC 8: LEARNING--PRACTICE--REMEMBERING AND FORGETTING
- BELL & HUNT: Units 16, 17 (pp. 114-126)  
KING: Readings for an Introduction to Psychology, pp. 300-312.  
FERNALD & FERNALD: pp. 189-197; Frames 11-26 to 11-70.  
REPRINT: "What Psychology Can We Feel Sure About"
- 3/27 40 POINT EXAM ON TOPICS 6, 7, 8
- 3/29-4/5 TOPIC 9: MOTIVATION AND DRIVE
- BELL & HUNT: Part 5, Adjustment & Maladjustment (pp. 151-160)  
Unit 21, Motivation & Drive (pp. 152-160)  
TEEVAN & SMITH: Chapters 1-5, (pp. 1-65)  
REPRINT: Scientific American 473. "Social Deprivation In Monkeys"  
REPRINT: Scientific American-429. "Love In Infant Monkeys"  
TAPE 132: "Motivation Theory and Psychodynamics" (22 min.)
- 4/14-4/22 TOPIC 10: EMOTION
- BELL & HUNT: Unit 22, Physiology of Emotion (pp. 161-166)  
Unit 23, Development of Emotions (pp. 167-172)  
MALPASS: Pages 250-259.  
BERELSON & STEINER: Pages 38-46.  
TAPE: 220- "Culture & Sexual Intimacy" (25 min.)

- 4/24-5/1 TOPIC 11: FRUSTRATION--DEFENSE REACTIONS, NEUROSES & PSYCHOSES
- BELL & HUNT: Units 24, 25, 26 (pp. 173-192)  
FERNALD & FERNALD: Chapter 8, Conflict & Adjustment, (pp. 126-141)  
TAPE 1111: "Diagnostic Categories" (22 min.)
- 5/3-5/8 TOPIC 12: PSYCHOTHERAPY
- BELL & HUNT: Unit 27, Types & Techniques of Psychotherapy  
pp. 193-200.  
BOOKLET: "Therapy of Personality Disorders"  
REPRINT: "Is Psychotherapy Tool or Fraud"  
TAPE 142: "The Evolution of Therapy" (22 min.)
- 5/10 50 POINT EXAM ON TOPICS 9, 10, 11, 12
- 5/13-5/15 TOPIC 13: COMPETITION--COOPERATION--ILLEGAL BEHAVIOR
- BELL & HUNT: Part 6, Psychological factors in Social Living,  
Units 28, 29, 30. (pp. 201-217)  
BERELSON & STEINER: pp. 53-65  
FERNALD & FERNALD: Chapter 17, Social Behavior (pp. 281-282)  
Frames 17-1 thru 17-7; pp. 287-298  
Frames 17-31 thru 17-85.
- 5/17-5/20 TOPIC 14: PERSUASION--PROPAGANDA--MASS COMMUNICATIONS--ADVERTISING
- BELL & HUNT: Units 31, 32 (pp. 218-232)  
TAPE: "Communist Indoctrination" (30 min.)
- 5/22 25 POINT EXAM ON TOPICS 13, 14
- 5/24-6/1 100 POINT COMPREHENSIVE FINAL EXAM

Materials Housed in Learning Center for Experimental Group Use

I. Programmed Texts

- A. Bell and Hunt - Self-Instructional Program in Psychology, Scott, Foresman Co., 1967 (paperback)
- B. Fernald and Fernald - Overview of General Psychology: A Basic Program, Houghton Mifflin Co., 1966 (paperback)
- C. Malpass, et. al. - Human Behavior, a Program for Self-Instruction, McGraw Hill, 1965 (hardback and paperback are identical)
- D. Smith and Moore - Conditioning and Instrumental Learning: A Program for Self-Instruction, McGraw Hill, 1966 (paperback)
- E. Teevan and Smith - Motivation, McGraw Hill, 1967 (paperback)

II. Regular Texts

- A. Berelson and Steiner - Human Behavior, Shorter Edition, Harcourt, 1967 (paperback)
- B. Tyler - Tests and Measurements, Prentice-Hall, 1963 (paperback)
- C. Whittaker, - Introduction to Psychology, W. B. Saunders Co., 1965

III. Books of Readings

- A. King - Readings for an Introduction to Psychology, McGraw Hill, 2nd edition, 1966 (paperback)

IV. Scientific American Reprints

- A. No. 469, "Early Environment"
- B. No. 473, "Social Deprivation in Monkeys"
- C. No. 429, "Love in Infant Monkeys"

V. Departmental Reprints (mimeographed)

- A. "Scientific Method in Psychology"
- B. "Personality Theory Revisited and Re-evaluated"
- C. "How Children Learn"
- D. "What Psychology Can We Feel Sure About?"
- E. "Is Psychotherapy Tool or Fraud?"

VI. Booklets

- A. Masserman, J. Therapy of Personality Disorders, William C. Brown Co., 1966

VII. Pre-recorded tapes

- A. Tape 120: "Heredity and Environment"
- B. Tape 137: "Principles of Child Development"
- C. Tape 1116: "The Assessment of Personality"
- D. Tape 132: "Motivation Theory and Psychodynamics"
- E. Tape 220: "Culture and Sexual Intimacy"
- F. Tape 1111: "Diagnostic Categories"
- G. Tape 142: "The Evolution of Therapy"
- H. Tape: Communist Indoctrination"



## Final Examination

1. A primary advantage of the Wechsler test is that
  - A. verbal and performance sections can be independently scored
  - B. it is superior in testing the IQ's of young children
  - C. it puts great emphasis on verbal as opposed to performance factors
  - D. it is a particularly precise measure of trait differences
2. Spontaneous recovery
  - A. is an increment in performance following rest
  - B. begins at a low level and increases to asymptote
  - C. is an increment in performance following extinction and rest
  - D. is an increment in performance occurring during extinction
3. Affective psychoses are characterized by the following syndrome cluster
  - A. withdrawal, silly giggling, childlike behavior
  - B. depression, pathological suspicion
  - C. disorganization of thought, agitated manic behavior, delusions of grandeur
  - D. extremes of mood, severe and longlasting depression broken by brief periods of mania
4. Validity refers to
  - A. what a test measures
  - B. how consistant a test measures
  - C. how reliable a test is
  - D. the usefulness of base rates
5. The inability to recall a traumatic childhood experience would be best accounted for by which of the following theories?
  - A. passive decay
  - B. systematic distortion
  - C. repression
  - D. interference
6. This theory of forgetting emphasizes that new learning interferes with the retention of old learning
  - A. proactive inhibition
  - B. motivated forgetting
  - C. retroactive inhibition
  - D. passive decay through disuse
7. The usual order of events in classical conditioning is
  - A. unconditioned stimulus-pause-response
  - B. conditioned stimulus-pause-response
  - C. unconditioned stimulus-conditioned stimulus-response
  - D. conditioned stimulus-unconditioned stimulus-response
8. The reliability of a test can be measured by
  - A. correlating test performance with some criterion measure
  - B. seeing how well a test predicts concurrent performance
  - C. computing coefficients of internal consistency
  - D. the stability of IQ over time

9. In which task would negative transfer be likely?
- A. flying a small kite, then a large kite
  - B. typing on an Underwood typewriter, then a Remington
  - C. driving with an automatic shift, then a standard shift
  - D. shooting an air rifle, then a 22-caliber rifle
10. Jim and Ruth are newly-weds who wonder whether their marriage will be happy. The most appropriate question they could ask themselves is
- A. was my childhood happy?
  - B. am I sexually compatible with my mate?
  - C. is my socioeconomic background similar to that of my mate?
  - D. both A. and B.
  - E. both A. and C.
11. Whenever a withdrawn child exhibited social behavior he was given a candy reward. This represents an attempt to change behavior by applying
- A. classical conditioning
  - B. operant conditioning
  - C. the principle of response generalization
  - D. discrimination learning
12. Which of the following statements is correct?
- A. obsessive-compulsive neuroses most frequently occur among the lower classes
  - B. there appears to be no relationship between the prevalence of psychosis and class membership.
  - C. The upper classes are more likely to suffer from extreme forms of behavior disorders
  - D. Lower classes accumulate relatively more individuals with mental illnesses of relatively long duration.
13. A child of average intelligence with a chronological age of five should have a mental age of
- A. four
  - B. five
  - C. eight
  - D. ten
14. What percent of the cases fall between plus and minus two standard deviations in a normal distribution?
- A. 50 percent
  - B. 68 percent
  - C. 95 percent
  - D. essentially 100 percent
15. The mean of a distribution is
- A. a measure of dispersion
  - B. the middlemost score
  - C. the score with the highest frequency
  - D. the arithmetic average

16. What effect does anxiety have on academic performance?
- A. at the extremes of ability, anxiety has considerable effect on academic performance
  - B. many of the dull students would do satisfactory work if they were not anxious
  - C. some students who have the ability to obtain a college degree fail to do so because of the effects of anxiety
  - D. at all levels of ability, anxiety facilitates performance by providing increased motivation
17. A person felt guilty about not helping a victim at the scene of an accident. He handled his guilt by telling himself that somebody more competent would probably come by to help. This is an illustration of which of the following?
- A. projection
  - B. displacement
  - C. rationalization
  - D. reaction formation
18. Whenever students in a classroom heard the end-of-class bell ring, they started to prepare to leave despite the fact that the professor gave no indication that the class was about to end. This behavior can be explained by
- A. classical conditioning, the bell is a CS
  - B. classical conditioning, the professor is a CS
  - C. instrumental conditioning, the bell is a UR (or UCR)
  - D. instrumental conditioning, the bell is a US (or UCS)
19. Endocrine glands
- A. secrete their products onto the surface of the body
  - B. secrete their products directly into the blood stream
  - C. are not properly classified as effectors
  - D. are strategically located in the cerebral cortex
20. Gestalt psychologists were interested primarily in
- A. unconscious processes
  - B. sensory processes
  - C. the organization and patterning of stimuli
  - D. faculty psychology
21. The basic units of the nervous system are specialized cells called
- A. ganglia
  - B. nerves
  - C. neurons
  - D. centers
22. The restatement and "reflection" of the patient's feeling by the therapist is an important aspect of
- A. psychoanalysis
  - B. group therapy
  - C. client-centered therapy
  - D. family therapy

23. Generalization is involved in concept formation, since the learner ultimately responds to
- A. only the stimuli which were rewarded during training
  - B. stimuli similar to the ones which were rewarded during training
  - C. all stimuli, regardless of their similarity or lack of it to the stimuli which were rewarded during training
  - D. all stimuli located in the general area in which the learner received training in concept formation
24. An exaggerated concern over orderliness and cleanliness is characteristic of which of the following disorders?
- A. obsessive-compulsive
  - B. paranoid
  - C. phobias
  - D. psychopathic personality
25. Which of the following might exemplify the experimental method in child psychology research, as opposed to observational and comparative:
- A. psychologist observes a group of children at play, as some are playing with blocks and others with sand, recording certain pre-specified types of behavior
  - B. psychologist trying to determine whether presence of parents causes increased agitation in the child by observing 1/2 of a group of nursery school children playing with blocks while the parents are present and the other 1/2 while parents are not present
  - C. psychologist first observing how Zuni children play with blocks, then how Zambesi children play with blocks
  - D. a psychologist traveling through the country observing how children in Apalachia play with blocks, to how children in the mountains of Idaho play with blocks
26. The fact that children of ages three and four can be taught to read by means of an electric typewriter
- A. appears to demonstrate that maturation is not the sole determiner of what a child can learn
  - B. means that reading should be taught then
  - C. supports a maturational viewpoint
  - D. creates a basic conflict at the theoretical level
27. The thematic Apperception Test is a (an)
- A. personality inventory
  - B. sociometric rating scale
  - C. projective test
  - D. objective test
28. Marlow's experiment with the wire "mother" and terry-cloth mother reveals that
- A. monkeys love the mother who feeds them
  - B. contact comfort is an important source of security
  - C. psychological accompaniments of feeding prove to be more important than had been previously thought
  - D. love is a derived need based on the reduction of the tension caused by physiological drives

29. Afferent is to efferent as  
 A. synapse is to center  
 B. center is to ganglion  
 C. incoming is to outgoing  
 D. few is to many
30. The primary symptom of neuroses is:  
 A. reaction  
 B. depression  
 C. anxiety  
 D. inferiority complex
31. The manic-depressive reaction is a kind of:  
 A. schizophrenia  
 B. neurosis  
 C. functional psychosis  
 D. organic psychosis
32. When electrodes are placed in the aversive centers of a rat's brain, and current is controlled by the bar-press response, he will:  
 A. go into a coma when the current is turned on  
 B. soon learn to ignore the shocks  
 C. bar-press to turn on the current  
 D. bar-press to turn off the current
33. Kathy dislikes both mathematics and German and is having difficulty in deciding which of the two subjects she should study first. She has a(n):  
 A. approach-avoidance conflict  
 B. double approach-avoidance conflict  
 C. avoidance-avoidance conflict  
 D. approach-approach conflict
34. A response tends to be made more readily when accompanied or immediately followed by some measure of satisfaction. Which of the following laws or principles does this statement define?  
 A. the law of recency  
 B. the law of frequency  
 C. the principle of practice  
 D. the principle of effect  
 E. the principle of contiguity
35. Which of the following sets of data would be most likely to be a normal distribution?  
 A. the heights of a thousand women who pass a given street corner  
 B. the intelligence quotients of all persons in a large school for feeble-minded  
 C. the chronological ages of a thousand first-grade elementary school children  
 D. the intelligence quotients of a combined group of 500 persons in a school for the feeble-minded and 500 college students  
 E. school marks of a large number of college seniors

Matching: In questions 36 through 38 read each statement in Column I; then decide which of the five techniques of propaganda in Column II is most clearly illustrated.

Column I

Column II

- |  |   |
|--|---|
| <p>36. Don't throw your vote away. Primary results show everybody is voting for Richard Nixon.</p> <p>37. Lotta Doe, a movie star, says that she owes her beautiful complexion to <u>Whitem Face Powder</u>.</p> <p>38. Faze is the detergent that goes five steps beyond white, and it's new, improved, and 120% better</p> | <p>A. Plain folks</p> <p>B. Card stacking</p> <p>C. Band wagon</p> <p>D. Glittering generalities</p> <p>E. Transfer and testimony</p> |
|--|---|

## Appendix C

39. A young woman recently married began speaking to her husband in baby talk. Though appearing mature and sophisticated in courtship, she was unprepared to meet the demands of marriage--especially sexual ones. She reacted symbolically by saying "I am only a little girl; don't expect too much of me." This is an example of:
- A. regression
  - B. displacement
  - C. transference
  - D. rationalization
40. Theodore Roosevelt, who was weak and asthmatic as a child, grew into a vigorous man who emphasized masculine, outdoor interests. This is an example of:
- A. attention-getting
  - B. compensation
  - C. rationalization
  - D. projection
41. A student who flunks a test and feels hostile and angry at the teacher but proclaims "That teacher doesn't like me!" may be using the mechanism of:
- A. fantasy
  - B. identification
  - C. overcompensation
  - D. projection
42. The most basic cause of defensive behavior is:
- A. physical inferiority
  - B. low social status
  - C. anxiety about sex
  - D. a concept of oneself as incapable
43. Studies of hunger and sensitivity show that hungry organisms:
- A. Are more than normally sensitive to nearly all aspects of their environment
  - B. Show increasing sensitivity to stimuli related to food as time passes, until their hunger is satisfied
  - C. Show increased sensitivity only to aspects of the environment related to food
  - D. Show decreased awareness of their surroundings as hunger exerts an inhibitory effect on their sensory processes
44. Which of the following is not true of pain as a drive:
- A. pain is most effective when it is prolonged and can be escaped by appropriate action
  - B. the withdrawal reflex is a good example of pain as a drive
  - C. neurotics react more strongly than normal persons to pain
  - D. pain is closely related to its general emotional setting
45. Follow-up studies of monkeys reared with artificial mothers showed that:
- A. Male monkeys were little affected
  - B. Female monkeys showed insatiable sexual desire after reaching maturity
  - C. Male monkeys would not mate
  - D. Female monkeys did a very good job of mothering their own young
46. Homeostasis is the tendency of the organism to:
- A. Strive to establish a constant physical environment
  - B. Protect itself from harmful conditions such as radiation
  - C. Seek new goals that are not essential to life
  - D. Strive for adventure and change
47. One important source of error in any rating scale is that
- A. it lacks reliability
  - B. it is too time consuming
  - C. subjects give too many false negatives
  - D. it can be influenced by the halo effect



48. The motive of curiosity in monkeys is apparently:
  - A. acquired during compativity
  - B. inadequate for learning without food rewards
  - C. innate
  - D. conditioned
49. Strong emotions:
  - A. render the individual temporarily almost incapable of action
  - B. increase sensitivity to pain
  - C. suppress the activity of the adrenal glands
  - D. enable a person to remain active for a longer period of time than normally
50. An animal would be most likely to be able to carry on the ordinary processes of life if deprived of its:
  - A. sympathetic nervous system
  - B. cranio-sacral system
  - C. parasympathetic nervous system
  - D. peripheral nervous system
51. In the emotional development of infants:
  - A. pleasant emotions appear earlier than distress
  - B. excitement is the first emotion to appear
  - C. fear is the first unpleasant emotion to appear
  - D. shame does not appear until the age of eleven months
52. The rabidly puritanical crusader against vice is likely to be engaging in:
  - A. reaction formation
  - B. sublimation
  - C. displaced aggression
  - D. undoing
53. The paranoid reaction is characterized by:
  - A. extreme swings of emotional mood
  - B. persistent delusions
  - C. complete breakdown of logical thought
  - D. compulsive, ritualistic behavior
54. The discharging of emotional tension by "talking out" or otherwise expressing one's frustrations is known as:
  - A. systematic desensitization
  - B. privileged communication
  - C. insight therapy
  - D. catharsis
55. Neo-Freudian psychotherapists differ from orthodox Freudians in their greater emphasis on:
  - A. the patient's current situation
  - B. analysis of transference
  - C. nondirective therapy
  - D. dream analysis
56. The standard deviation:
  - A. is dependent upon the size of the sample
  - B. is the simplest measure of variability
  - C. indicates how closely scores cluster around the mean
  - D. is computed on the basis of the median score
57. An individual's scores on different tests can be compared directly by the use of:
  - A. standard scores
  - B. correlation coefficients
  - C. ranges
  - D. medians
58. If the correlation coefficient between Test A and Test B is zero, it is safe to predict that, of the 100 persons who scored in the upper half of the class on Test A, how many will score in the upper half on Test B?
  - A. none
  - B. 50
  - C. 75
  - D. 100

## Appendix C

59. Studies of the constancy of the IQ have found that:
- A. very young children show the most stable IQ scores
  - B. low IQ scores tend to rise by several points
  - C. the average fluctuation in IQ is only about five points
  - D. among those with high IQ's the fluctuation is usually 10-20 points
60. The use of partial reinforcement:
- A. makes experimental extinction more difficult
  - B. prevents spontaneous recovery
  - C. prevents stimulus generalization
  - D. results in higher-order conditioning
61. The process by which stimuli that are not inherently rewarding may come to be desired for themselves is known as:
- A. spontaneous recovery
  - B. secondary reinforcement
  - C. stimulus generalization
  - D. higher-order conditioning
62. A curve showing the entire course of the learning process would be:
- A. a curve of equal returns
  - B. a curve of increasing returns
  - C. a curve of decreasing returns
  - D. an S-shaped curve
63. When the present task involves attaching new responses to stimuli used in a prior task, the result is likely to be:
- A. positive transfer
  - B. psychological feedback
  - C. proactive inhibition
  - D. spontaneous recovery
64. DNA (deoxyribonucleic acid) is a substance, found always and only in nuclei, which
- A. transmits characteristics between generations
  - B. contains instructions for development
  - C. is the hereditary substance
  - D. is all of these
  - E. is none of these
65. Each gamete (i.e., egg or sperm) is formed by an orderly process which ensures that it contains
- A. one-half the chromosomes of the adult
  - B. all the chromosomes of the adult
  - C. twice as many chromosomes as the adult
  - D. one chromosome for each trait of the adult
  - E. all the genes of the adult
66. From our knowledge of the influence of early-life experience and of deprivation of appropriate stimulation during infancy, which of the following statements is most correct? For most children severe deprivation in infancy
- A. has no differential effect on most future behavior
  - B. has an unpredictable effect on most future behavior
  - C. has profound effects which can generally be well overcome by the experiences of a normal, healthy home life in later years
  - D. has profound effects which are lasting and are very difficult to overcome, even by the experiences of a normal, healthy home life in later years
67. A single nerve fiber responds to a stimulus
- A. in direct proportion to the strength of the stimulus
  - B. according to the form of energy of the stimulus
  - C. by contracting
  - D. when the stimulus strength exceeds a threshold value
  - E. when the stimulus ceases



Appendix C

68. The portion of the human brain concerned with coordination of voluntary activity is the  
A. spinal cord  
B. brain stem  
C. cerebellum  
D. cerebrum  
E. hypothalamus
69. The group of psychologists known as the functionalists were noted for their emphasis on:  
A. methods of adjustment  
B. observable behavior  
C. conscious experience  
D. patterns of behavior
70. The mark that distinguishes sound work in any science is  
A. use of easily testable hypotheses  
B. precise measurements  
C. adequate control of the dependent variable  
D. replicability
71. The experimental method, as compared to the field-study method, makes greater use of:  
A. analysis  
B. control  
C. measurement  
D. objective observation
72. The receiving elements of the nerve cell are the  
A. axons  
B. end brushes  
C. dendrites  
D. nuclei
73. Acting as a general arousal system is an important function of the  
A. reticular formation  
B. hypothalamus  
C. occipital lobe  
D. rhinencephalon
74. The master control center for the endocrine system lies in the  
A. islets of Langerhans  
B. pituitary gland  
C. primary somatosensory area of the cortex  
D. hypothalamus
75. Kratschmer and Sheldon were leaders in the attempt to assess personality through study of  
A. handwriting  
B. body types  
C. expressive behavior  
D. physiognomy
76. According to Miller and Dollard, neurotic conflicts stem from  
A. failure to achieve self-actualization  
B. contradictory cultural demands  
C. wrong choices early in life  
D. discrepancies between unconscious desires and the self concept
77. A major limitation of projective tests is that they  
A. reveal only superficial personality characteristics  
B. are not sufficiently objective  
C. are readily subject to faking  
D. are difficult to use with mental patients
78. Studies of the value of the Rorschach test have shown that it  
A. is a valuable aid in predicting the success of management personnel  
B. can readily discriminate between normal, neurotic, and psychotic individuals  
C. is valuable chiefly for predicting how patients are likely to react to treatment in psychiatric clinics  
D. has shown disappointing results in most areas in which it has been used

## Appendix C

79. The autonomic nervous system plays a major part in  
A. emotional states C. hunger  
B. learning, especially motor learning D. thinking and cognitive processes
80. Alfred Binet developed one of the following. Which one?  
A. a test of primary mental abilities  
B. a battery of achievement tests in psychology  
C. a series of test of personality traits  
D. a test of general mental ability
81. Which of the following kinds of studies has the disadvantage of usually losing a number of the subjects being studied?  
A. longitudinal study C. cross-sectional study  
B. field-study method D. laboratory experiment study
82. The influence of the endocrine glands on physiological processes can best be described as  
A. excitatory C. regulatory  
B. indirect D. inhibitory
83. An experimenter will tentatively relate particular variables by stating  
A. a control factor C. a hypothesis  
B. an experimental variable D. a formula design
84. Which of the following regions of the neonate would normally develop control and specific movements last?  
A. toes C. eyes  
B. fingers D. arms
85. Which statement is true only of psychological and social drives, not of biological drives?  
A. deprivation can result in emotional or physical illness  
B. They are regulated to a minor extent by cultural patterns  
C. they direct the individual's behavior toward some goal  
D. they are strongly associated with symbolic rewards
86. The principal difference between neurosis and psychosis is  
A. neurosis is curable whereas psychosis rarely can be cured  
B. in psychosis the individual has lost contact with reality to a much greater extent than in neurosis  
C. neurosis almost never incapacitates the individual  
D. psychosis is hereditary but neurosis is not
87. Which of the following is not a good method of adjustment in daily life?  
A. learning to keep undesirable emotions from reaching consciousness  
B. cultivating a sense of humor about one's self  
C. reinterpreting situations that appear frustrating  
D. accepting without resentment things which cannot be changed
88. Sudden deafness which disappears under hypnosis and is caused by unconscious conflict is an example of  
A. hysteria C. hypochondria  
B. malingering D. neurasthenia
89. If the conditioned stimulus is presented in the first of a series of extinction trials, immediately following acquisition trials, the result is  
A. a conditioned response C. spontaneous recovery  
B. experimental extinction D. an unconditioned response

## Appendix C

90. When a subject is presented with stimuli that are somewhat different and is asked to respond in a particular way to the difference, the type of learning involved is
- A. perceptual recognition
  - B. sensory or stimulus discrimination
  - C. motor acuity
  - D. paired associates
91. It is easier to learn some kinds of verbal materials than others. The order of difficulty from easiest to hardest is
- A. meaningful poetry, nonsense syllables, meaningful prose, digits
  - B. nonsense syllables, meaningful poetry, digits, meaningful prose
  - C. meaningful prose, meaningful poetry, nonsense syllables, digits
  - D. meaningful poetry, meaningful prose, digits, nonsense syllables
92. Knowledge of results is often called
- A. proactive inhibition
  - B. psychological feedback
  - C. proactive facilitation
  - D. positive transfer
93. A person's recall is usually better for material that is
- A. in agreement with his own attitudes
  - B. related to very painful experiences
  - C. opposed to his own opinions
  - D. slightly unpleasant
94. The responses associated with emotion which are least susceptible to self control are:
- A. voice changes
  - B. facial expression
  - C. behavior patterns
  - D. physiological activities

True-False:

95. The technique of immediate reinforcement for training animals developed rapidly in the psychologist laboratory, but proved to be of little use in programmed instruction in humans.
96. The series of learning frames and questions in simple programmed instruction is a device for "shaping" verbal behavior, and this "shaping" is seen as quite similar to the "shaping" of, for example a bar pressing response by a white rat in a Skinner box.
97. Which of the following is probably the least important factor in leadership?
- A. personal popularity
  - B. abstract intelligence
  - C. empathy
  - D. emotional stability
98. The phenomenon by which a baby chick will follow the first moving object to which it is exposed is known as
- A. paired association
  - B. higher order conditioning
  - C. stimulus generalization
  - D. imprinting

True-False:

99. Most factors studied in effective persuasion have been rather directly related to the contents of the "message" and very little impact is made by other factors, such as source, audience, amount of change attempted, etc.
100. Extent and freedom of communication in small groups have definite influence on group organization effectiveness, and morale.

## GENERAL PSYCHOLOGY STUDENT OPINION BLANK

Please check the following items with reference to the subject matter contents of the general psychology course (the knowledge, ideas, concepts, principles, and facts).

1. My attitude toward and interest in psychology is:

- ( ) well above average or high.
- ( ) somewhat above average or fairly high.
- ( ) average or moderate.
- ( ) somewhat below average or fairly low.
- ( ) well below average or low.

2. My opinion of the usefulness of what I have learned in the general psychology course for my future personal life is that it will be:

- ( ) very useful.
- ( ) fairly high in usefulness.
- ( ) moderately useful.
- ( ) fairly low in usefulness.
- ( ) of almost no use.

3. My opinion of the usefulness of what I have learned in the general psychology course for my future occupation or life work (whatever it may turn out to be):

- ( ) very useful.
- ( ) fairly high in usefulness.
- ( ) moderately useful.
- ( ) fairly low in usefulness.
- ( ) of almost no use.

4. My opinion of the usefulness of what I have learned in the general psychology course for my future studies, course work, and education:

- ( ) very useful.
- ( ) fairly high in usefulness.
- ( ) moderately useful.
- ( ) fairly low in usefulness.
- ( ) of almost no use.

5. My opinion of the general psychology course as an appropriate and valuable introduction to the science of behavior is that it was of:

- ( ) very high value and appropriateness.
- ( ) fairly high value and appropriateness.
- ( ) moderate value and appropriateness.
- ( ) fairly low value and appropriateness.
- ( ) very low value and appropriateness.

Please use the back of this sheet to write any comments you may have about the subject matter contents of the general psychology course.

## Appendix D

Please check the following items with reference to the teaching-learning method (way of presenting the material or the contents of psychology) used in your class of the general psychology course.

1. The teaching-learning method used in my class resulted in the use of my study time in a way best described as:

- ( ) efficient and well used.
- ( ) fairly high in efficiency and fairly well used.
- ( ) moderately efficient and moderately well used.
- ( ) fairly low in efficiency fairly poorly used.
- ( ) inefficient and poorly used.

2. This particular teaching-learning method was:

- ( ) interesting and sustained my study and learning efforts.
- ( ) fairly high in arousing interest and in sustaining my study and learning efforts.
- ( ) moderately interesting and moderately sustained my study and learning efforts.
- ( ) fairly low in arousing interest and in sustaining my study and learning efforts.
- ( ) uninteresting and did very little to sustain my study and learning efforts.

3. I judge the degree of appropriateness of this teaching-learning method for use by college students to be:

- ( ) very appropriate
- ( ) fairly high in appropriateness.
- ( ) moderately appropriate.
- ( ) fairly low in appropriateness.
- ( ) very inappropriate.

4. In comparison to the teaching-learning method used in most other college courses you have taken, this method was:

- ( ) very appropriate.
- ( ) fairly high in appropriateness.
- ( ) moderately appropriate.
- ( ) fairly low in appropriateness.
- ( ) very inappropriate.

5. For the purpose of encouraging or allowing rather complete learning of the major contents, concepts, ideas, principles, facts, and knowledge of general psychology, this teaching-learning method was:

- ( ) very appropriate.
- ( ) fairly high in appropriateness.
- ( ) moderately appropriate.
- ( ) fairly low in appropriateness.
- ( ) very inappropriate.

Please use the back of this sheet to write any comments you may have about the teaching-learning method used in your class of the general psychology course.